a generator module to generate a data condition of the diagnostic information.

[c21] 21. A software program for selecting a method of processing the physiological data, the software program comprising:

a data collection module to collect data;

a signal separation module that receives the data from the data collection module and separates the asynchronous component from the synchronous component; and

a selector module that selects a data manipulation process based on the diagnostic information.

[c22] 22. A software program as set forth in claim 21, wherein the signal separation module further comprises:

an analysis module to analyze at least a one of a rhythm, an atrio-ventricular conduction, a ventricular rate, a P wave amplitude, a QT interval and an age qualifier from the diagnostic information.

[c23] 23. A software program as set forth in claim 21, wherein the data manipulation process is a lossy process that low-pass filters, down-samples, re-quantizes, compares, polarity reversal encodes and Huffman encodes the data.

[c24] 24. A software program as set forth in claim 21, wherein the data manipulation process is a lossless process that compares and Huffman encodes the data.

[c25] 25. A method of automatically selecting a data compression scheme, the method comprising:

receiving raw data including an asynchronous component and a synchronous component;

separating the asynchronous component from the synchronous component;

classifying a data condition based on the asynchronous component; and

selecting a data compression scheme based on the data condition.

[c26] 26. A method as set forth in claim 25, wherein the act of selecting of a data manipulation process includes classifying an abnormality condition of the asynchronous component.

[c27]

27. A method as set forth in claim 25, wherein data compression scheme

comprises a lossy process and a lossless process, and wherein the method further comprises the act of processing the asynchronous component and the synchronous component using a one of the lossy process and the lossless process.

[c28]   28. A method as set forth in claim 27, wherein the data compression scheme is a lossy process.

[c29]   29. A method as set forth in claim 27, wherein the data compression scheme is a lossless process.

[c30]   30. A medical device comprising:
a patient data acquisition device that collects physiological data including an asynchronous component having diagnostic information and a synchronous component; and
a software program for selecting a method of processing the physiological data and manipulating the physiological data based on the method selected, the software program including a signal separation module that receives the data from the data collection and separates the asynchronous component from the synchronous component; a selector module that generates a data manipulation process selection based on the diagnostic information; and a data manipulator module that manipulates the asynchronous component and the synchronous component according to the component type and the data manipulation process selection of the selector module.

[c31]   31. A medical device as set forth in claim 30, wherein the signal separation module further comprises:
a classifier module to classify an abnormality condition of the diagnostic information.

[c32]   32. A medical device as set forth in claim 31, wherein the classifier module further comprises:
an analysis module to analyze at least a one of a rhythm, an atrio-ventricular conduction, a ventricular rate, a P wave amplitude, a QT interval and an age qualifier from the diagnostic information.

[c33]   33. A medical device as set forth in claim 30, wherein the data manipulation

process is a lossy process that low-pass filters, down-samples, re-quantizes, compares, polarity reversal encodes and Huffman encodes the data.

[c34]   34. A medical device as set forth in claim 30, wherein the data manipulation process is a lossless process that compares and Huffman encodes the data.

[c35]   35. A medical device as set forth in claim 30, wherein the selector module further comprises:
a generator module to generate a data condition of the diagnostic information.

[c36]   36. A software program for compressing physiological data, the software program comprising:
a data collection module to collect data;
a signal separation module that receives the data from the data collection module and separates the asynchronous component from the synchronous component;
a selector module that selects a data manipulation process based on the diagnostic information; and
a data manipulator module that manipulates the asynchronous component and the synchronous component based on the data manipulation process selected.

[c37]   37. A software program as set forth in claim 36, wherein the signal separation module further comprises:
an analysis module to analyze at least a one of a rhythm, an atrio-ventricular conduction, a ventricular rate, a P wave amplitude, a QT interval and an age qualifier from the diagnostic information.

[c38]   38. A software program as set forth in claim 36, wherein the data manipulation process is a lossy process that low-pass filters, down-samples, re-quantizes, compares, polarity reversal encodes and Huffman encodes the data.

[c39]   39. A software program as set forth in claim 36, wherein the data manipulation process is a lossless process that compares and Huffman encodes the data.

[c40]
40. A method of automatically selecting and applying data compression scheme, the method comprising:
receiving raw data including an asynchronous component and a synchronous